

ABSTRACT

An absorbent article is disclosed that provides improved leakage protection. Also disclosed are methods for using and preparing absorbent articles having improved leakage protection, methods for designing articles having improved leakage protection, and methods of measuring and determining the performance index of an absorbent article. The absorbent article having improved leakage protection has a 3 variable urine only leakage performance index (PI_{3UL}) of less than about 3.0, the PI_{3UL} being determined in accordance with the following equation (1):

$$\text{PI}_{3UL} = 0.046 (\text{Tc}) - 2.94 (\text{MS100}) - 0.772 (\text{AUL}) \quad (1)$$

where Tc is the total capacity in grams, MS100 is the percent utilization of the core upon insult with 100 ml of 0.9 wt% saline solution, and AUL is the front pad absorbency under load, expressed in grams of 0.9 wt% saline solution absorbed per gram of pad material.